

Concern over Career is the Primary Reason for Poor Mental Health among Students

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How to cite this article: Agnita Kundu, Sampurna Kundu et al Concern over career is the primary reason for poor mental health among students. Volume 13 | Issue 4 | October-December 2022

Abstract

COVID-19 is the cause of a lot of concern around the world. Apart from the obvious physical distress it has contributed significantly to elevation of mental health issues. Students who mostly have not been vaccinated are doing online classes with severe restriction on their social lives. Survey was done with students from school, college and university to determine their mental health status. Their mental health was evaluated with the DASS-21 questionnaire that was distributed and collected online. The students were found to have become vulnerable to stress, anxiety and depression. Their mental health status was found to be poor with university students being most affected. Upon Correlation studies with relevant questions on online education and consequent change in their mode of studies and interaction with family and friends, it was found that university students' concern over their career led to their poor mental health

Keywords: Anxiety, COVID-19, Depression, Mental Health, Stress, Student.

Introduction

Students represent the future generation of the society. The health of a society is reflected in the happiness of a student. Hence it is important to know the mental health status of the students and what elevates or depresses them ¹.

Premise: The world have been combating SARS-COV since the last 2 years. As the disease spread Indian Government was forced to impose complete nationwide lockdown from 24th March, 2020, initially for 21 days, which was extended multiple times till 30th of May to a total of 68 days. The lockdown was successful as the cases in India came down and India started phase wise lifting of lockdown from June, 2020. India went through 7 phases of lifting of lockdown or unlock 1.0 to 7.0 and different establishments were taken out from the ambit of lockdown as is shown

in table 1. However, educational institutions were not taken out of it. The decision to open education institutes were left to the respective states. Though some states decided to open schools and colleges but unfortunately had to shut down again due to infection amongst teachers and students ². Their experience deterred other states from opening their educational institutes. Many states closed down school at the rise of COVID cases during the second wave³. As vaccination of school going age group started since January, 2022, hence, opening of educational institutions where large number of students and teachers get together was not a viable option until recently. Therefore the students were at home since the beginning of the lockdown on 24th of March, 2020. Most of the educational institutions were taking online classes for the students.

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This unprecedented situation in a students' life led to many changes in their life. The mental health of students was assessed and was found to be affected adversely. The students underwent a gamut of emotions collectively during this pandemic that hardly any student of any generation has faced before. By asking the right questions it is possible to ascertain what affected the students' mental health most during the pandemic. This data can be used later for the betterment of the students.

Literature Survey: Studies have been done in different countries in the world to see the effect of the pandemic and consequent lockdown on the mental health of the students. From a high school students perspective in USA it is seen that adolescent students were specially prone to anxiety as they were missing the social support of the school⁴. Studies were done in Poland, where it was deduced that early intervention is needed to prevent the psychological breakdown of students⁵. A survey done on students of Delhi showed that students were undergoing stress and anxiety due to the disease and its consequent loss in social life^{6,7}. The mental health issues were prevalent and even more apparent among LGBT, transgender groups.⁸ Similar study was also done in students of India, Bangladesh and Pakistan and was shown that students suffered from anxiety and stress because of fear of contracting the disease^{9,10}.

Students were facing all the problems that their families were facing due to unemployment or death or ill health due to COVID. The families of COVID warriors were especially prone to this¹¹. Moreover the students, were now privy to all the problems of the families without the mode to escape from it in schools or sharing with friends which is putting a strain on the relationships within the family¹². The students were also worried about their job prospects, their lack of expertise in real classroom situation, lack of experience that many used to get from intern positions. Students taking their lives for not being able to do classes is doing the rounds of social media¹³. The students of the government schools, who were mostly from poor families were the worst affected¹⁴. All of these were leading to mental health problems in students. Continuous studies of mental health at different stages of the lockdown and comparison of mental health studies done before and after the lockdown has been done to see the effect of this unprecedented phenomenon on our lives One such study done in Switzerland showed that mental health

did worsen during lockdown¹⁵. However, there is not enough study on mental health of students due to pandemic and consequent lockdown in India. This article takes a look at how the continuous lockdown and online classes have affected the mental health of the students across the stages of our education after 18 months from the start of the lockdown. Our education system has three distinct stages. At the onset there is Montessori schools, who were also taking online classes. However those students being too small were kept out of the survey. Beyond that we have the school students ranging from nursery to class 12 (students from class 9 onwards were included in the survey). Usually, a student then progresses to college and finally to university for postgraduation. Many students also opt for vocational courses. The responsibility, worries, anxiety faced by each stage of the students are different. Their reaction to pandemic, lockdown also depends on their socio economic status. Many students from poor families and rural areas were not able to afford a phone and sometimes they also do not have easily accessible internet connection. The students who were able to do the classes properly have also been restricted to their houses. Active life of playing, interaction with friends and teachers has been diminished. This has taken a toll on the mental health of the students.

At present vaccination of the general populace is being carried out all over the world to contain the disease. WHO has approved of the Pfizer/BioNTech vaccine for use in children from 12 to 18 years of age, which is being used in many countries in the world¹⁶. Below 12 years no conclusive trials have been done. In India vaccines are now available for children between 12 to 18 years. Covaxine is used to vaccinate children between 15 to 18 years of age¹⁷ and for children between 12 to 15 years the vaccine used is Corbevax manufactured by Biological E¹⁸.

Justification for the study: Even though the COVID restrictions are now over and most of the education institutes have opened, the study is still relevant as it tried to find out what affects the young minds of the students the most. During the pandemic and lockdown the students underwent a range of experiences and emotions that they may never have experienced otherwise. They have experienced a lifetime in this 2 years, hence this lockdown however unfortunate has opened up a possibility of studying the young minds and exploring what affects them most. The article takes a look at the mental health of

the students and also asks some pertinent questions causing these mental health issues. COVID-19 has been a great equaliser for students of all backgrounds. The students all faced similar situations and issues, hence the study done at 18 months after the lockdown (when the students have experienced this new life for some period) has the potential to eliminate the background inequalities and determine what are the most pertinent concerns for a student.

Table 1: Phases of lockdown during Covid-19 in India

Phase of Unlock	Date	Activities allowed (for educational institutions)
1	30.5.2020	Closed
2	29.6.2020	Closed
3	29.7.2020	Closed
4	29.8.2020	50% teaching and non-teaching and non-teaching staff permitted to come to institutes outside containment zones. Students may come for guidance voluntarily and upon parent's consent.
5	30.9.2020	Schools may reopen in a graded manner after 15 th October upon permission of the state government or Union territories. Attendance is voluntary and subject to parental consent.
6	30.9.2020	State government allowed to take decision on reopening of educational institutes.

Source: www.mha.gov.in

Methodology:

Study Design and participants

The present study is cross-sectional and based on an online survey with quantitative approach. The survey was conducted in the online mode, keeping in mind the COVID-protocols. Information was gathered regarding the mental health status of students of schools, colleges and universities. Google forms were

circulated for data collection, with invitation for participation through social media platforms, from 10th to 20th June, during the Covid-19 second wave lockdown in India. The survey was conducted in English language, and informed consent was obtained prior to the starting of survey and were informed about the purpose of the study. The total number of participants in this study is 395.

Measures

Individual characteristics: The sample characteristics of the participants included age, gender, residence type, education level, type of education institution, stream of education, and average monthly family income of the participants.

Effect of Online mode of Education: These questions included- Do you miss interacting with your friends?; Do you miss interacting with your teachers?; Do you feel that it is going to have an effect on your career?; Do you think you are learning as much as before?; and, Do you like that examinations are getting cancelled/delayed?.

Mental health assessment: Mental health of the participants was assessed using the Depression, Anxiety and Stress Scale with 21-items (DASS-21) (Figure 1). These are measured on a 4-point Likert scale that ranges from 0 (did not apply to me at all) to 3 (apply to me very much). Further, the mental health scores can be classified as : Depression - Normal (0-9), Mild (10-13), Moderate (14-20), Severe (21-27), Extremely Severe (28+); Anxiety- Normal (0-7), Mild (8-9), Moderate (10-14), Severe (15-19), Extremely Severe (20+); and, Stress- Normal (0-14), Mild (15-18), Moderate (19-25), Severe (26-33), Extremely Severe (34+).

Data analysis

Descriptive statistics were employed for assessing the data, followed by bivariate analysis and data visualization. Cronbach's alpha was used for testing the reliability of the DASS-21 scale. Scores for depression, anxiety and stress were computed and also a composite mental health index has been constructed to assess the overall mental health status of students. A generalized linear model regression, with logit link function belonging to binomial family, and the model is adjusted for the covariates that

includes the sample characteristics as well as the other questions considered in the study. Consider Y_i as the observed binary outcome, that is, mental health indicators (making them dichotomous), for the i^{th} individual and x_i 's are the covariates, the equation is given by

$$\log \left[\frac{\pi_i}{1 - \pi_i} \right] = x_i^T \beta = \alpha + \beta_i x_i$$

where α is the intercept β_i 's are regression coefficients. All the analysis have been done in STATA 14.2.

Results

The sample demography is given in table 2.

Table 2: Descriptive statistics of the sample characteristics (N=395)

Sample characteristics		N(%)
Age	6-47 (Mean-20.52±3.59)	
Gender	Male	110(27.85)
	Female	285(72.15)
Residence type	Urban	327(82.78)
	Rural	68(17.22)
Average monthly family income	less than Rs.20,000/-	89(22.53)
	Rs. 20,001/- to 80,000/-	174(44.05)
	Rs.80,001/- to Rs. 1.50,000/-	80(20.25)
	more than Rs. 1,50,000/-	52(13.16)
Education level	School	47(11.9)
	College	250(63.29)
	University	98(24.81)
Type of Education institution	Private	185(46.84)
	Government	210(53.16)
Stream of education	Science	228(57.72)
	Humanities	73(18.48)
	Commerce	62(15.7)
	Others	32(8.1)
Total	N	395

Mental health assessment

The Cronbach's alpha (α) of depression, anxiety, stress and composite mental health scores were found to be 0.93, 0.86, 0.87 and 0.94, respectively, thus indicating a good internal consistency of the DASS-21 scale

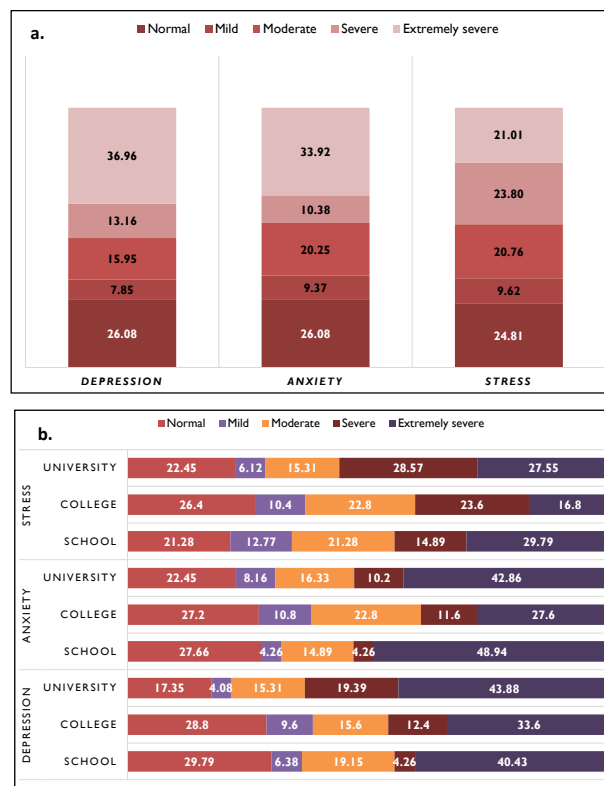


Figure 1: Mental health status of a. all students; and b. students across school, college and university

Overall, the sampled students are mostly depressed, anxious and stressed (**Figure 1a**). More students had normal level of depression and anxiety than stress. Higher percentage of students were extremely severely depressed than stressed. The majority of university students are observed to be extremely depressed (40.43%) and anxious (43%), whereas maximum school students are extremely stressed (29.79%). The maximum college students are found to be mostly having a normal mental health status (**Figure 1b**).

Some pertinent questions were asked around the system of online education to the students to determine the source of their poor mental health.

As observed from **Figure 2**, that majority of the students be it school, college or university, miss interacting with their friends and teachers (>80%). The college students missed interaction with teachers

and friends maximally followed by university students and school students. Almost more than 80% of the students from school, college and university are feeling that their careers are going to be affected. The university students felt most strongly about the deficiency in learning in an online mode (82%), followed by college (73%) and school students (60%). The college and university students were more bothered about examinations getting cancelled or delayed.

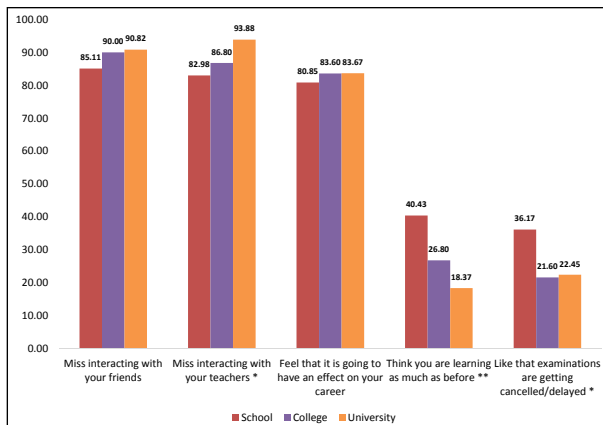


Figure 2: Effect of the online mode of education through relevant questions

Regression Analysis

The regression model was run that showed all the indicators of DASS-21 questionnaire can capture the anxiety, depression and stress measure significantly well ($p < 0.01$). Unit increase in age caused a significant increase in depression (OR: 1.958; $p < 0.01$), stress (OR: 1.947; $p < 0.01$), anxiety (OR: 1.021; $p < 0.01$) and overall mental health score (OR: 1.830; $p < 0.05$). Females were found to be more likely to have poor mental health than males (Depression- OR: 1.170; $p < 0.05$; Anxiety- OR: 1.239; $p < 0.10$; Stress- OR: 1.152; $p < 0.05$; Composite Mental Health Score- OR: 2.5; $p < 0.10$). With increasing average monthly family income the mental health status improved, thus indicating economic vulnerability is related to poor mental health (Composite Mental Health Score- OR: 1.011; $p < 0.10$). In comparison to school students, the college and university students were significantly more likely to suffer from depression, anxiety, and stress. Students who felt that their careers are going to be affected were more likely to have poor mental health (Depression- OR: 2.609; $p < 0.01$; Anxiety- OR: 2.418; $p < 0.05$; Stress- OR: 1.876; $p < 0.10$; Composite Mental Health Score- OR: 2.142; $p < 0.05$).

Discussion

The overall mental health plot (figure 1a) shows that only 25% have normal mental health and 75% suffers from stress, anxiety and depression. It is the logical reflection of the current time, as stress, depression and anxiety all are related to reactions to any reason that causes imbalance to our physical and mental well being¹⁹. It was interesting to note that extreme stress was less than extreme depression and anxiety. It was reported in China that depression and anxiety increased during COVID pandemic²⁰. The college students appear to be least affected by the lockdown situation of the pandemic. It was also observed that students of university suffered more depression and anxiety, though stress level of all students were the same. Anxiety happens due to worrying over future and depression comes from past experiences²¹. As university students have appreciable past experiences as well as concern for the near future hence anxiety and depression is more for them. Similar conclusions were also drawn from a survey conducted with the University students in Spain²². The school students due to their age and security of parents and family and less responsibility are at a better mental state in this uncertain times.

For further investigation we correlated the answers of the questions to their state of mental health. It was seen that the strongest correlation is found for the question that talks about their career. Hence for university students as there are at the threshold of their career, they are suffering maximum anxiety and depression. 90% of university students also answered positively when they were asked whether it is going to affect their career (figure 2). It is interesting to note that 90% of them also said they miss interacting with their friends and teachers. However the poor correlation of it with mental state shows that it is not influencing their mental health. The 90% of university students also stated that they are not learning adequately, however that is also not affecting the mental health state. It can be concluded that for the students the impact that COVID will have on their career bothers them maximally leading to high level of depression and anxiety. Career development has a profound effect on mental health and counselling is suggested²³. A study on medical students of China and India also revealed that the pandemic is influencing their career choice and mental health in a negative way^{24,25}. It was seen that with age the mental health deteriorates. Previous studies suggest

that the correlation of age with mental health is not very straight forward and many other factors need to be considered²⁶. Also it was seen that the female respondents have poorer mental health than their male counter parts. The gender difference in mental health has been observed before and documented in the pre pandemic era²⁷, and it has also been studied and supported by study done in Austria and India^{28,29}. Therefore it is important that mental health problems in students are addressed adequately and educational institutions can take a positive role in it. The students need the support of their peer group of other students as well as their teachers. Some schools also has academic and psychological counsellor who can help. However though education institutes have opened there is still considerable opposition about sending children to school at present. A before and after study in Italy showed that mental health of students was worse after the lockdown than before. However they also observed that after the lockdown was over students got back to their previous mental health status³⁰. Therefore it is important for students to experience pre-lockdown status as much as possible albeit with proper precautions.

Conclusions

The first measure to curb COVID was imposition of a lockdown all over the world. The educational institutions deal with one of the most vulnerable population of the society, the children, the future generation Online mode of classes had kept the education of the students functional however there was considerable lack of normalcy in their life which leads to mental health issues. The online survey conducted on 395 students across school, college and university to assess their mental health showed some interesting results. Their mental health was assessed by the DASS-21 questionnaire. It was seen that students are suffering from stress, anxiety and depression. University students possess very poor mental health. The mental health also deteriorated with age. Female students showed poorer state of mental health than male students. The concern for their career was found to be responsible for the poor mental health of the students. It is suggested that support and counselling is needed for the students of all ages even after educational institutions have opened up.

Acknowledgement

Dr. Agnita Kundu acknowledges Shri Shikshayatan College for their support.

Funding

The article was written with no financial assistance

Conflict of Interest

The authors declare no conflict of interest.

Ethical concerns

The study is an independent research and therefore informed consent clearance was considered. An informed consent was obtained prior to the starting of survey and the participants were informed about the purpose of the study.

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